

**Abstract**

A liquid treatment system that may be self-powered includes a filter, an ultraviolet light source and a hydro-generator in a first flow path. The first flow path  
5 may provide treated liquid at a first outlet of the liquid treatment system. A second flow path included in the liquid treatment system may provide untreated liquid at a second outlet of the liquid treatment system. The first and second flow paths may be included in a housing, and may be selectable with a switching mechanism by a user of the liquid treatment system. The housing may be mounted at the end of a faucet. The  
10 hydro-generator may generate electric power for use by the ultraviolet light source and a processor. The processor may monitor the electric power and energize the ultraviolet light source with the electric power when the rotational speed of the hydro-generator enters a determined range.